Title (en)

System and method for packet level distributed routing in fiber optic rings

Title (de)

Vorrichtung und Verfahren zum in Stufen verteilten Routen von Paketen in faseroptischen Ringen

Title (fr)

Système et méthode de routage de paquets distribué en niveaux dans des anneaux à fibre optique

Publication

EP 1083696 A3 20051214 (EN)

Application

EP 00119349 A 20000908

Priority

US 39374799 A 19990910

Abstract (en)

[origin: EP1083696A2] IP user traffic is transporting over a fiber optic ring network that includes a plurality of fiber optic ring network nodes. One (108) ring is for conducting the user traffic on a working path and the other ring (110) is for conducting the same user traffic on a protection path in the event of a failure in a communication link in the first ring on a protection path. A central node (300) is coupled to a plurality of nodes (312, 316, 320) to provide forwarding tables and updates to the nodes (312, 316, 320). As a result, IP traffic may be routed through the fiber optic ring network in a manner that provides fast switching from a working path to a protection path to minimize lost data packets whenever a communication link in the working path fails. Additionally, this capability is provided without requiring each node to have full IP routing capability. The forwarding tables (308) for the protection and working paths provide for path routes and forwarding for the packets on a packet by packet basis. Accordingly, a ring may serve as both a working path and a protection path according to the origin and destination of the data packets traveling thereon. Additionally, the central node (300) is adapted to generate multiple forwarding tables (308) to accommodate packet by packet forwarding in a network created to support virtual private networks. The forwarding tables (308) also are set up to support multicast transmissions of data packets. <IMAGE>

IPC 1-7

H04J 14/02; H04Q 11/00

IPC 8 full level

H04J 14/02 (2006.01); **H04L 12/56** (2006.01); **H04Q 11/00** (2006.01)

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Citation (search report)

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